

Growth and Development Climate Framework - Status Update

The Priorities and Finance Committee (PFC2021-0121) recommends:

2) Approve a one-time budget increase of \$250,000 in 2021 and \$450,000 in 2022 from the Fiscal Stability Reserve investment income to accomplish project deliverables; and report back to Council through the SPC on Planning and Urban Development on the implementation of the associated projects by Q2 2022 (re-scheduled to Q1 2023).

Summary and Background

This attachment is intended to provide a status update on the Council adopted [Growth and Development Climate Framework](#) (Framework; PFC2021-0121) per the above recommendation. In March 2021, Council adopted the Framework and additional budget to add temporary positions to support the development and implementation of the Framework. The Framework includes a range of [actions](#) intended to integrate climate mitigation and resilience measures into the planning approvals continuum (Figure 1). More specifically, it reflects Calgary's climate goals of achieving net zero greenhouse gas (GHG) emissions by 2050 and the reduction of climate risks through our city building process.

The planning approvals continuum conceptualizes the planning and land development review and approvals process from start (policy) to finish (post-occupancy) (see Figure 1). Each stage of the continuum represents a juncture at which climate resilience and GHG emissions reduction strategies may be integrated. The Framework provides Administration with opportunities to:

- **pilot** innovative approaches, and ideas before committing resources to implementation of comprehensive programs, policy or process changes;
- engage with developers, builders and Calgarians and share information through a range of **education** and capacity building opportunities;
- encourage action through appropriate **incentive programs** (e.g., financial assistance, streamlined approvals); and;
- incorporate learnings into decision making through **regulatory mechanisms** (e.g., statutory policy, land use bylaw, and other similar mechanisms over which The City has legislative control).

The overarching goal of the Framework is to leverage the planning approvals continuum to enable objectives of the recently updated Calgary Climate Strategy: Pathways to 2050.

Figure 1 below is intended to demonstrate how the Framework actions generally align with individual stages of the planning approvals continuum. For each project and initiative currently underway, the figure shows their span across the relevant steps in the planning approvals continuum that each project can affect. Projects and initiatives are sorted by colour into categories of Awareness and Education, Incentives, Policy/Regulation, and Pilot Projects. The figure includes previously adopted actions as well as several new initiatives to support integration of climate-related objectives into planning's decision-making and policy development.

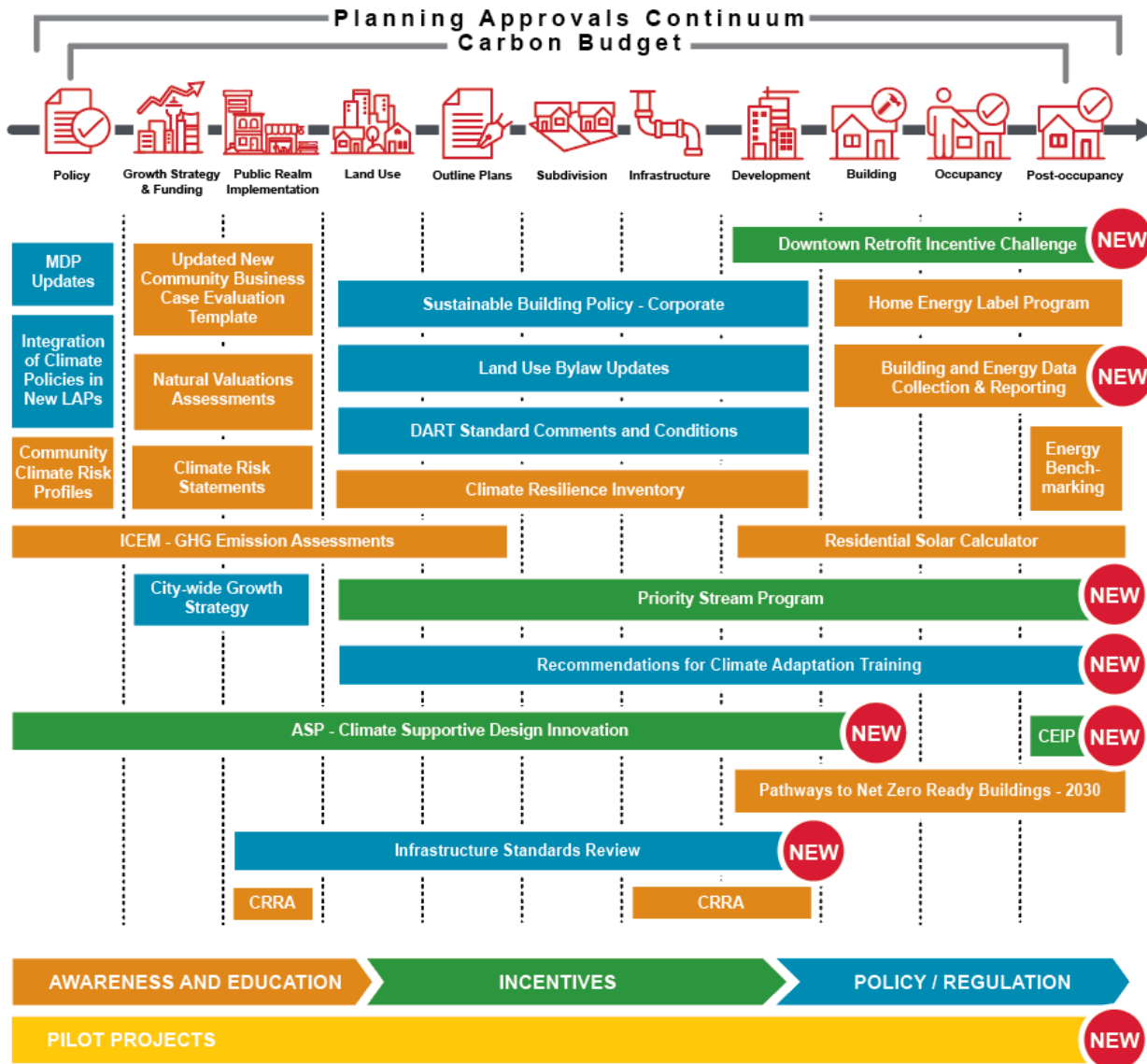


Figure 1: General Alignment of Growth & Development Climate Framework actions to the planning approvals continuum

(Figure 1 Legend: **MDP** - Municipal Development Plan; **LAP** - local area plan; **ICEM** - Integrated City Energy Map; **ASP** - area structure plan; **DART** – Development Applications Review Team; **CRRA** - Climate Resilience and Risk Assessment; **CEIP** - Clean Energy Incentive Program; **RECAP** - Recommendations for Climate Adaptation Planning)

Current progress and Next Steps

Council adopted an updated [Calgary Climate Strategy – Pathways to 2050](#) (Calgary Climate Strategy) in July 2022. As part of the update, new actions and GHG emissions reduction targets have been established for 2030 and 2050. The Framework’s goal is to develop implementation tools and processes along the planning approvals continuum to enable Calgary to reach these targets and improve the way Calgarians build new and renovate existing buildings, move around the city, and manage adaptation efforts in response to a changing climate.

As identified in the status update tables below, several of the Framework's actions may be considered complete and/or in the implementation phase; however, most actions and associated work will require ongoing effort as individual actions continue to develop and evolve. Some of the key projects and initiatives that support development and implementation of the Framework include, but are not limited to:

- **Pilot Projects**

Pilots provide an avenue to test new approaches without long term commitments and expenditures. Pilot projects also offer an additional level of flexibility to innovate with limited risks to The City and pilot participants. In keeping the direction contained in the Climate Strategy, a wide range of external (e.g., affordable housing and utility providers, local builders) and internal partners (e.g., Real Estate & Development Services, Assessment, Planning) have been and will be engaged to pilot the following initiatives:

- Completed: Streamlining development reviews and approvals for high-performance buildings
- Completed: Building performance and renewable energy systems data capture
- Underway: GHG reductions and climate resilience through community design
- Underway: Multi-residential deep energy retrofits
- Underway: Tax Incentives for renewable energy projects on brownfield sites
- Underway: Downtown retrofit challenge
- Underway: Homeowners Energy Labeling Program
- Planned: Building floor area increase for high-performance buildings
- Planned: Application fee incentives for low carbon projects

- **Best Practice Study on Climate-related Building Standards by Canadian Municipalities**

Administration commissioned a study to explore implementation of climate-related building standards. The study entailed policy reviews of six major municipalities: Vancouver, Toronto, Edmonton, Winnipeg, Halifax, and Montreal. The key objective of this study was to inform The City's position on implementation options of climate-oriented building standards – see the "BUILDING" table below for additional details.

- **Climate Risk and Resilience Overlay**

Administration also commissioned the development of a Climate Risk and Resilience Overlay to understand where the greatest opportunities are to integrate climate risk reduction measures into the planning approvals continuum. The report recommends a range of actions to better integrate climate adaptation into The City's building process. Administration is in the process of implementing recommendations (i.e., Land Use Bylaw amendments) provided by the consultant and assessing the appropriate course of action for the remaining recommendations provided by the consultant.

The work completed to date, which has primarily focused on capacity building and incentives represents a foundational step towards future substantive actions as new regulatory tools are introduced over time. The cumulative impact of implementation tools that are currently available along the planning approvals continuum has resulted in limited GHG emissions reductions and reduced vulnerability to climate change hazards. However, as industry capacity and public demand for climate resilient and energy efficient buildings increases, Administration will continue to adjust approaches in supporting Calgarians in their responses to climate change. That may include, but is not limited to the following:

- A) continuing to develop new funding streams and development approvals process incentives to partially offset the additional cost associated with building retrofits, new high-performance buildings, and deployment of renewable energy systems;
- B) working with other orders of government on developing and implementing additional legislative and regulatory tools to ensure all Calgarians have access to affordable, safe, and comfortable housing options, which are benefits commonly associated with climate resilient and energy efficient buildings;
- C) refinements of development servicing standards to reduce infrastructure vulnerability to damage from extreme weather events and resulting financial liabilities; and
- D) accelerating public education and outreach efforts to support capacity building and awareness so that Calgarians can, through their actions, influence the local market's response to the recently declared climate emergency and implementation of the [Calgary Climate Strategy: Pathways to 2050](#).

Acknowledging the importance of collaboration, Administration is committed to working with our communities, private sectors, and government partners to continually improve the integration of climate mitigation and adaptation in future policies and development projects.

Future progress on integrating climate-related actions into the planning approvals continuum will be shared with Council in Administration's Annual Climate Report.

Project Updates

The following tables provide high-level status updates on individual, [previously adopted actions by Council in 2021](#) (PFC2021-0121) and associated work completed to date. The tables also detail some of the upcoming work intended to support the integration of climate-related education, incentives, and regulatory-based elements into the planning approvals continuum during the OneCalgary business cycle and into the future. Information contained in the tables is not exhaustive, but rather offers a general overview. Some tables represent a single stage on the planning approvals continuum, while other tables contain actions associated with two or more stages in the continuum.

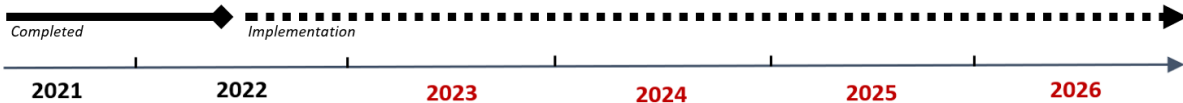
Planning approvals continuum stage

POLICY

(Regional) Growth Plan

Climate Strategy Alignment: M.H1.3

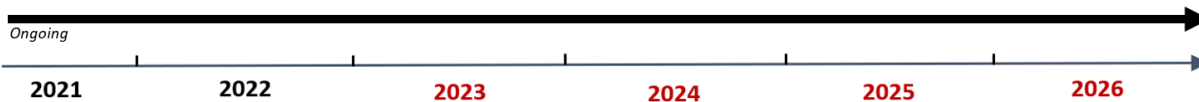
The updated [Growth Plan](#) was approved by the Calgary Metropolitan Region Board in 2021 and by the Minister of Municipal Affairs in 2022. The objective of high-level applicable policies is to reduce the region’s impact on the environment and climate. Additional work will be required to outline implementable measures to support GHG emissions reductions and the region’s ability to withstand extreme climate events.



Municipal Development Plan

Climate Strategy Alignment: M.H1.1

Municipal Development Plan (MDP) amendments are in progress to 1) direct Administration to prioritize climate mitigation and adaptation considerations during land use/outline plan application reviews; and 2) create opportunities for innovation to support climate mitigation and adaptation goals. Opportunities to incorporate climate change as a key strategic priority of the forthcoming Calgary Plan (upcoming merger and update of the MDP and Calgary Transportation Plan) are being explored by Administration.

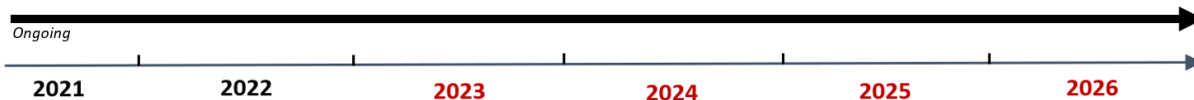


Local Area Policy Plans

Climate Strategy Alignment: M.H1.2

Local area plans (LAP) currently under development or recently approved in **established areas** include policies to support implementation of climate mitigation and adaptation measures as redevelopment occurs. The broader goal of these statutory policies, which in most cases use “should” and “encourage” statements, is to raise awareness, inform climate-focused conversations between the Approving Authorities and builders, and support high performance projects through review process trade-offs and incentives.

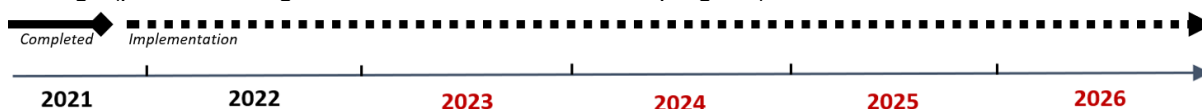
Administration is in the process of evaluating applicable existing local area plans (i.e., area structure plans), which provide guidance for the build out of new **greenfield areas**, to further enable new community design innovation, support GHG emissions reductions and improve climate resilience, including through relaxations of existing infrastructure design guidelines where necessary and appropriate.



Calgary’s Greater Downtown Plan

Climate Strategy Alignment: M.H1.3

[Calgary’s Greater Downtown Plan](#) was adopted in 2021. The Plan provides climate mitigation and adaptation foundations for initiatives such as the building & resilience performance incentive design challenge (part of the larger downtown office conversion program).



Planning approvals continuum stage

GROWTH STRATEGY & PUBLIC REALM IMPLEMENTATION

New Community Growth

Climate Strategy Alignment: M.H2.1, M.H2.2, M.H3.2

The [New Community Business Case Evaluation Criteria](#) was updated in 2021 to include three MDP/climate-based criteria asking individual business case proponents to identify if and how they would:

- protect natural assets beyond the minimum requirements;
- implement measures to adapt to climate risks; and
- mitigate GHG emissions.

In 2022 Administration conducted a supplementary analysis of each business case based on GHG emissions profiles (generated by buildings and vehicular trips), natural asset inventories, and climate risk statements submitted by proponents. Recommendations were provided to business case proponents for measures to reduce GHG emissions and climate risks. As major updates are made to the process of approving new community development, Administration is committed to refining and improving the integration of climate-related considerations into this fundamental Planning Approvals Continuum stage.



Established Area Growth & Change and Public Realm Implementation

Strategy Alignment: M.H2.2

Established Area Growth and Change capital investment recommendations submitted as part of the 2023 2026 Service Plans and Budget process include climate adaptation considerations for the public realm improvement project selection process.

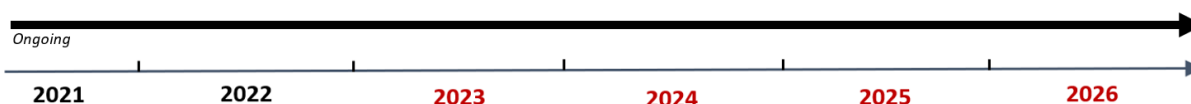
While ensuring that individual public realm enhancement projects capture climate mitigation and adaptation in their design and implementation, this portfolio of work and investments is intended to encourage city-wide growth patterns that are aligned with the MDP policies. Targeted re-investment in strategic established areas offers a range of ancillary climate-related benefits that will continue to support Council's efforts in Calgary becoming a more compact, sustainable and climate-resilient city.



Industrial Action Plan

Climate Strategy Alignment: M.H1.4

The Council approved Industrial Action Plan identifies and evaluates opportunities to support industrial operators in achieving their corporate commitment to sustainability, and Calgary's climate mitigation and adaptation goals. Administration, in collaboration with industrial stakeholders, is currently exploring opportunities to implement various mitigation and adaptation actions and support industrial operators in reducing GHG emissions and reducing vulnerability to climate-related hazards in industrial areas.



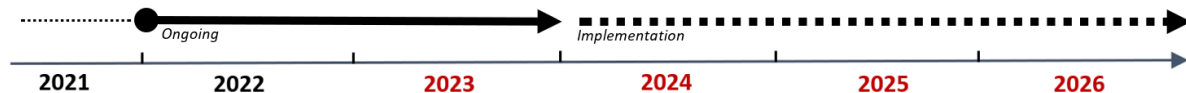
Planning approvals continuum stage

LAND USE, OUTLINE PLAN & SUBDIVISION

Land Use Bylaw

Climate Strategy Alignment: M.H1.3, M.H4.1, M.H4.2

Formal work on the Land Use Bylaw (LUB) renewal is expected to start in 2023 and conclude toward the end of 2025. [Research](#) and engagement conducted with other Canadian municipalities suggests that a range of amendments to the Land Use Bylaw to support high performance projects and improve climate resilience could be introduced in the interim. The first set of amendments will introduce changes to the administrative section; exempt building energy retrofits from development permit requirements; and offer incentives for new high-performance buildings. These amendments will be brought to Council for approval in Q2 in 2023.



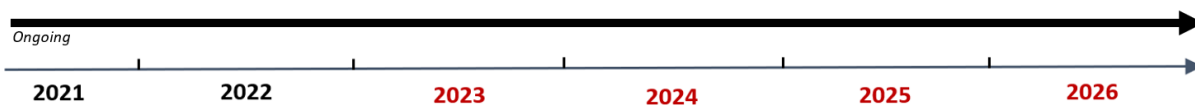
Land Use Amendment & Outline Plan Applications

Climate Strategy Alignment: M.H3.3

Every standalone land use and land use/outline plan application must include a [Climate Resilience Inventory \(CRI\)](#). The CRI is a tool intended to raise awareness of available adaptation and mitigation measures early in the development approval process. Administration is exploring updates to the CRI in 2023. Based on data collected through the submitted CRIs, most applicants have challenges identifying and committing to GHG reduction and/or climate adaptation measures at subsequent development approvals stages.

However, in situations where applicants do identify specific climate measures, implementation of the measures at development and building permit stages largely depends on the developers' willingness to follow through on their commitments. Preliminary work is therefore underway to reduce this implementation gap and to work with internal and external partners to improve the implementation continuity between "land use/outline plan" and "development and building permit" approval stages.

Background research is being conducted to support development of necessary regulatory tools to enable development of net zero emissions and climate resilient communities. The outcome of this work is directly dependent on the readiness of all key internal and external partners to engage in a collaborative exercise, ability to compromise, wiliness to pilot new approaches with local developers and builders, and legislative and funding support from all orders of government.



Design Guidelines for Subdivision Servicing

Climate Strategy Alignment: M.H1.3

Evolution of applicable community and infrastructure design standards and associated supporting studies (e.g., Transportation Impact Assessment, Geotechnical Assessment, Biophysical Impact Assessment) will play a key role in Calgary's ability to transition toward developing net zero and climate resilient communities. Administration is committed to an ongoing engagement with industry partners, and assessment of all opportunities to advance The City's engineering standards in line with best available science and climate-focused practices.



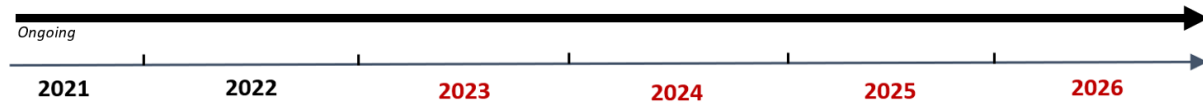
Planning approvals continuum stage

PUBLIC INFRASTRUCTURE & DEVELOPMENT

Public Infrastructure

Climate Strategy Alignment: A.C6.2, A.C6.5

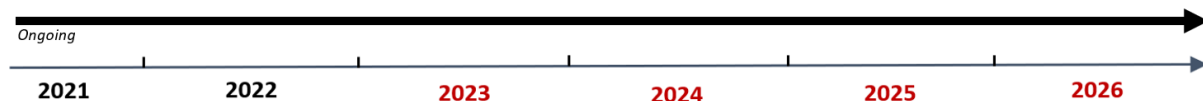
Through 2021 and 2022, several climate risk and resilience assessments (CRRAs) were completed for public and partner infrastructure projects using a City-specific assessment process. The CRRAs assess climate risk and recommend climate resilience measures. GHG assessments are typically completed accompanying the CRRA. The implementation of recommended resilience measures will be further explored for the upcoming budget cycle and on a project specific basis.



Development Permit Applications

Climate Strategy Alignment: M.H4.1

All major Development Permit applications must include a [Climate Resilience Inventory](#), which is intended to raise awareness regarding climate mitigation and adaptation opportunities. Additionally, Administration developed a range of climate change-oriented comments and conditions for use in development permit and land use amendment reviews (i.e., Pre-application and Detailed Team Reviews) that are intended to align application outcomes with the goals and targets of the Climate Strategy. A process-based incentive to prioritize the reviews and approvals of high-performance buildings was piloted in 2022 and resulted in a formal process-based incentive program (i.e., [Green Buildings Priority Stream](#)) which has been launched in 2023.



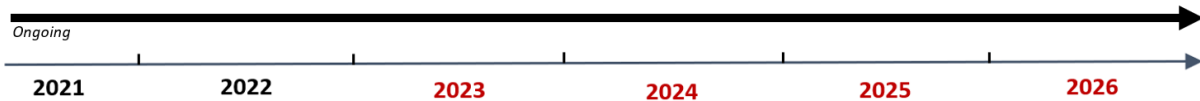
Planning Approvals Continuum Stage

BUILDING

Sustainable Building Policy – Corporate

Climate Strategy Alignment: M.H1.3

Administration is working on updates to the Sustainable Building Policy Guidance Documents including a range of mitigation, adaptation, and sustainability requirements. The next update is anticipated late 2023.



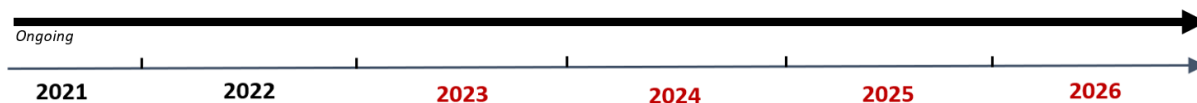
Pathways to Net Zero Ready Buildings by 2030

Climate Strategy Alignment: M.A5.1, M.B5.1

The National Research Council of Canada has published an updated version of energy codes in 2022. The updates include specific performance tiers. No timetable for implementation of respective tiers has been formally provided by the Province at this time. In parallel, Administration completed a [cross-jurisdictional study](#) (Study) of implementation options and tools to accelerate the creation and/or adoption of enhanced building energy performance standards. The Study offers a unique research data set, including recommendations on potential process, regulatory and incentive tools that may be feasible in Calgary’s legislative context.

In keeping with the Study’s recommendations, Administration is in the process of launching several incentive and pilot programs intended to promote industry leaders committed to high-performance building construction and share practical knowledge with the broader land development community and Calgarians. That includes but is not limited to the following initiatives: Enabling Climate Action through the Land Use Bylaw, Home Energy Labeling Program, Green Buildings Priority Stream, Downtown Retrofit Challenge, Deep Energy Retrofit Pilot or Low Carbon Investment Incentives.

Incentives are a critical component of Calgary’s journey towards improved energy efficiency. However, as two thirds of Calgary’s emissions are generated by buildings, Calgary will not meet its GHG reduction targets without effective regulatory tools requiring improved thermal flow of energy, energy consumption and installation of renewable energy systems. The Calgary Charter provides Calgary with legislative powers that allow Council to pass bylaw(s) to mandate improved building performance if the bylaw(s) are consistent with the Safety Codes Act, its regulations, and applicable building codes.



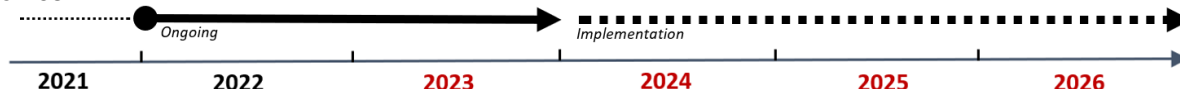
Planning approvals continuum stage

BUILDING OCCUPANCY & POST OCCUPANCY

Home Energy Labeling

Climate Strategy Alignment: M.A1.1

A framework for a Home Energy Label Program is being developed with the intention of requiring EnerGuide Labels on all new construction homes and creating a digital label for all existing homes. The information generated will be used to better inform builders, realtors, and homeowners about the energy and GHG emissions performance of homes in Calgary, and drive market transformation towards more energy efficient products. Administration is finalizing the Program design prior to launching one year pilot phase. A bylaw is being drafted to stipulate future mandatory requirements for construction of new homes.



Energy Benchmarking

Climate Strategy Alignment: M.A1.2

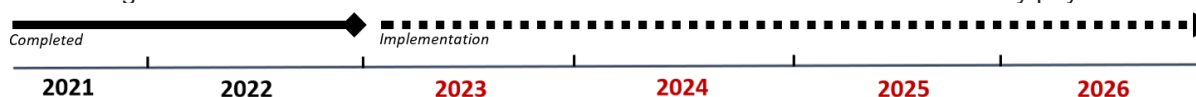
Year 3 of the [Energy Benchmarking program](#) launched October 2022. This program helps building owners measure and compare their energy use and prioritize poor performing buildings for energy audits and retrofits. The outreach component of the program encourages commercial and institutional building owners to share their building energy performance data with The City. The collected data is used to communicate with the broader community about energy usage in Calgary. An interactive map shows participating buildings and highlights energy use intensity and emissions. 99 of the total 198 buildings that have been benchmarked since 2019 are City of Calgary facilities. QuadReal Property (21), Brookfield Office Properties (5) or Boardwalk REIT (36) represent some of the private landowners participating in the program.



Clean Energy Improvement Program

Climate Strategy Alignment: M.B3.1

Administration launched the [Clean Energy Improvement Program](#) (CEIP) on January 31, 2023. Calgarians have shown their enthusiasm, exceeding initial expectations for year one and surpassing all other individual CEIP programs in Alberta. CEIP provides accessible financing for energy efficiency and renewable energy upgrades with repayment through a property's tax bill. The CEIP Bylaw was approved by Council in 2021 and The City's application for a loan and grant to support the program was approved by the Federation of Canadian Municipalities (FCM) in August of 2022. Contractor recruitment was initiated in Q4 2022 and energy efficiency and renewable energy contractors and professionals are encouraged to sign-up and participate in program on-boarding. Preliminary efforts to expand the program into the commercial sector within the next four years is underway. Administration is also considering the addition of a calculator tool for consumers to better understand monthly payments.



Residential Solar Calculator

Climate Strategy Alignment: M.D4.1, M.D4.2

This publicly available resource has been updated in 2022 and renamed [Residential Solar Calculator](#). This online tool helps inform homeowners about the viability of solar photovoltaic (PV) panels as a renewable energy source to residential buildings (single and semi-detached homes) in Calgary.

